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|--|--|---|--------------------|----------|---|--------------------|-----------|---|-----|--|---|---------|--|---|
| Change Number<br><b>M-15-01-06</b>   | Federal Facility Agreement and Consent Order<br>Change Control Form<br>Do not use blue ink. Type or print using black ink.                         | Date<br><b>12/13/01</b>   |                    |          |   |                    |           |   |     |  |   |         |  |   |
| Originator<br>M. J. Furman   | Phone<br>373-9630  |   |                    |          |   |                    |           |   |     |  |   |         |  |   |
| Class of Change  | <input type="checkbox"/> I - Signatories <input type="checkbox"/> II - Executive Manager <input checked="" type="checkbox"/> III - Project Manager |   |                    |          |   |                    |           |   |     |  |   |         |  |   |
| Change Title<br>Modifications to the Groundwater Sampling and Analysis for the 100-FR-3 Operable Unit<br>Groundwater Sampling Project  |  |   |                    |          |   |                    |           |   |     |  |   |         |  |   |
| Description/Justification of Change<br><br>Change quarterly Sr-90 sampling for well 199-F5-1 to annual sampling. Remove 199-F5-3 from well list due to inability to obtain samples (well dry).   |  |   |                    |          |   |                    |           |   |     |  |   |         |  |   |
| <p>The attached Tables 1 and 2 summarize the changes to 100-FR-3 sampling. Minor modifications to the list of specific wells used and constituents analyzed may occur to meet the changing field conditions and the results of data evaluation.</p> <p><b>Impact of Change</b></p> <p>Information gathered from annual sampling will continue to adequately reflect groundwater conditions.</p> <p><b>Affected Documents</b></p> <p>1) Remedial Investigation/Feasibility Study Work Plan for the 100-FR-3 Operable Unit, Hanford Site, Richland, WA; DOE/RL-91-53, September 1992. 2) 100 NPL Agreement/Change Control Form #39, "100-FR-3 Operable Unit Groundwater Monitoring Network," EPA approval December 1992; 3) Federal Facility Agreement and Consent Order Change Control Form, Change Number M-15-96-06, 4) Federal Facility Agreement and Consent Order Change Control Form, Change Number M-15-99-02.</p> |  |   |                    |          |   |                    |           |   |     |  |   |         |  |   |
| <p><b>Approvals</b></p> <table border="0"> <tr> <td><i>[Signature]</i></td> <td>12/13/01</td> <td><input checked="" type="checkbox"/> Approved      <input type="checkbox"/> Disapproved</td> </tr> <tr> <td><i>[Signature]</i></td> <td>(2-17-01)</td> <td><input checked="" type="checkbox"/> Approved      <input type="checkbox"/> Disapproved</td> </tr> <tr> <td>EPA</td> <td></td> <td><input type="checkbox"/> Approved      <input checked="" type="checkbox"/> Disapproved</td> </tr> <tr> <td>Ecology</td> <td></td> <td><input type="checkbox"/> Approved      <input checked="" type="checkbox"/> Disapproved</td> </tr> </table>   |  |   | <i>[Signature]</i> | 12/13/01 | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved | <i>[Signature]</i> | (2-17-01) | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved | EPA |  | <input type="checkbox"/> Approved <input checked="" type="checkbox"/> Disapproved | Ecology |  | <input type="checkbox"/> Approved <input checked="" type="checkbox"/> Disapproved |
| <i>[Signature]</i>   | 12/13/01   | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved |                    |          |   |                    |           |   |     |  |   |         |  |   |
| <i>[Signature]</i>   | (2-17-01)  | <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved |                    |          |   |                    |           |   |     |  |   |         |  |   |
| EPA  |  | <input type="checkbox"/> Approved <input checked="" type="checkbox"/> Disapproved |                    |          |   |                    |           |   |     |  |   |         |  |   |
| Ecology  |  | <input type="checkbox"/> Approved <input checked="" type="checkbox"/> Disapproved |                    |          |   |                    |           |   |     |  |   |         |  |   |

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Table 1. Sampling and Analysis Schedule for 100-FR-3  
Groundwater Project

| Well Number               | Facility Monitored/Purpose                                    | Schedule                | Program | Change                             |
|---------------------------|---|-------------------------|---------|------------------------------------|
| 79-F1-2                   | Lewis canal/near river  | A                       | FRRI    | None                               |
| 99-F5-1                   | 116-F-2 Liquid waste disposal trench/near river               | A                       | FRRI    | Quarterly to Annual Sr-90 Sampling |
| 199-F5-3                  | 116-F-2 Liquid waste disposal trench/near river               | A                       | FRRI/S  | Removed from schedule - dry        |
| 199-F5-4                  | 105-F Reactor building effluent disposal                      | 2-O                     | FRRI    | None                               |
| 199-F5-5                  | 116-F-9 Animal farm liquid effluent                           | N/A                     | N/A     | Reserve                            |
| 199-F5-6                  | Biological and pharmacological laboratory effluent            | A                       | FRRI/S  | None                               |
| 199-F5-42                 | 107-F Retention basin/near river                              | A                       | FRRI    | None                               |
| 199-F5-43A                | 107-F Retention basin/near river                              | A                       | FRRI    | None                               |
| 199-F5-43B<br>(deep well) | 107-F Retention basin/near river                              | A                       | FRRI    | None                               |
| 199-F5-44                 | Biological and pharmacological laboratory effluent/near river | A                       | FRRI    | None                               |
| 199-F5-45                 | 105-F Reactor building effluent                               | 2-O/Q(NO <sub>3</sub> ) | FRRI    | None                               |
| 199-F5-46                 | 105-F Reactor building effluent                               | A/Q(CP*)                | FRRI/S  | None                               |
| 199-F5-47                 | 105-F Reactor building effluent                               | 2-E                     | FRRI/S  | None                               |
| 199-F5-48                 | 105-F Reactor building effluent                               | 2-E                     | FRRI    | None                               |
| 199-F6-1                  | 116-F-2 Liquid waste disposal trench/near river               | A                       | FRRI    | None                               |
| 199-F7-1                  | Background/TCE plume  | 2-E                     | FRRI/S  | None                               |
| 199-F7-2                  | 116-F-1 "Lewis" canal   | 2-E                     | FRRI    | None                               |
| 199-F7-3                  | Background/TCE plume  | 2-O                     | FRRI/S  | None                               |
| 199-F8-2                  | 105-F Reactor building effluent                               | 2-E                     | FRRI/S  | None                               |
| 199-F8-3                  | Background/118-F-1 solid waste burial ground #2               | 2-O                     | FRRI/S  | None                               |
| 199-F8-4                  | Area downgradient of facilities                               | A                       | FRRI    | None                               |
| 699-71-30                 | Background/downgradient                                       | 2-O                     | FRRI    | None                               |
| 699-74-44                 | Background/TCE plume  | N/A                     | N/A     | Reserve                            |
| 699-77-36                 | Background/TCE plume  | 2-E                     | FRRI    | None                               |
| 699-80-43B                | Background/TCE plume  | N/A                     | N/A     | Reserve                            |
| 699-81-38                 | Background/TCE plume  | 2-O                     | FRRI    | None                               |
| 699-82-32                 | Background  | N/A                     | N/A     | Reserve                            |
| 699-82-34                 | Background  | N/A                     | N/A     | Reserve                            |
| 699-83-36                 | Background  | N/A                     | N/A     | Reserve                            |
| 699-83-47                 | Background  | 2-E                     | FRRI/S  | None                               |
| 699-84-35A                | Background(See Table 2)                                       | 2-O                     | FRRI/S  | None                               |
| Seep 187-1                | Area/shoreline exposure                                       | A                       | FRRI    | None                               |
| Seep 190-4                | Area/shoreline exposure                                       | A                       | FRRI    | None                               |
| Seep 207-1                | Area/shoreline exposure                                       | A                       | FRRI    | None                               |

Notes: 2-E = biennial sampling, even years (starting 1998), A = annual sampling, 2-O = biennial sampling, odd years (starting 1997), S = Surveillance Monitoring, FRRI = 100-FR-3 Remedial Investigation  
N/A = not applicable/decommissioned well

Table 2. Analysis Suite Codes for the 100-FR-3 Groundwater Project

| Analysis/Parameter  | Constituent           |           |
|---|-----------------------|-----------|
| Metals by routine ICP (EPA 6010A- Target Analyte List)  | Aluminum              | Iron      |
|   | Antimony              | Magnesium |
|   | Barium                | Manganese |
|   | Beryllium             | Nickel    |
|   | Cadmium               | Potassium |
|   | Calcium               | Silver    |
|   | Chromium              | Sodium    |
|   | Cobalt                | Vanadium  |
|   | Copper                | Zinc      |
| Anions by IC (EPA 300.0)  | Chloride              | Nitrate   |
|   | Fluoride              | Sulfate   |
| Volatile Organics   | TCL (including TCE)** |           |
| Radionuclide screening  | Gross alpha           |           |
|   | Gross beta            |           |
|   | Activity scan*        |           |
| Specific radionuclides  | Strontium-90          |           |
|   | Tritium               |           |
| Field parameters  | pH                    |           |
|   | Specific conductance  |           |
|   | Temperature           |           |
|   | Turbidity             |           |
| Note: * = Well 699-84-35A only, ICP= Inductively coupled plasma<br>IC = Ion chromatography, ** - TCL samples obtained from wells identified as monitoring "TCE plume" in Facility Monitored/Purpose column of Table 1.<br>Constituent selection based on TPA Change Control Form M-15-96-06, August 1996. |                       |           |